

Asymptomatic Pharyngeal Pouch in Laimer Hackermann Triangle in Oral Cavity

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ABSTRACT

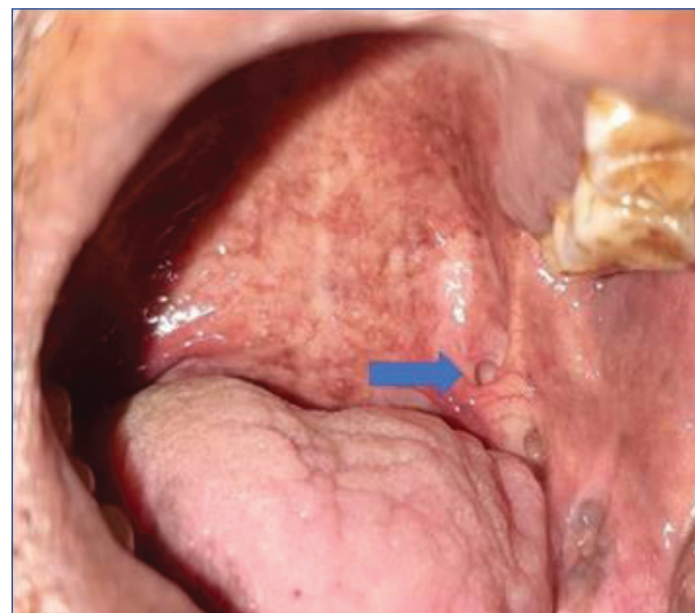
Laimer's or Laimer triangle Hackerman's area is a potentially weak location behind the cricopharyngeal muscle, where the posterior oesophageal wall is thin because of a single layer of circular fibres. Dysphagia, odynophagia, and hoarseness of voice are the predominant symptoms, although they can also be asymptomatic and get worsen to aspiration and pharyngeal pouch rupture. The authors here present a case report of a rare, normal anatomical variation in a 76-year-old male patient, which was diagnosed accidentally as Laimer Hackermann diverticulum when he arrived to seek a treatment for missing teeth. Clinically, it presented as an asymptomatic palatal pouch in the left faucial pillar region. The asymptomatic presentation of Laimer Hackermann diverticulum has rarely been reported previously in the literature and this report is the first of its kind to add a unique asymptomatic presentation of the Laimer Hackermann pharyngeal pouch.

Keywords: Diverticula, Dysphagia, Faucial pillar, Oesophageal wall, Oropharynx

CASE REPORT

A 76-year-old male patient reported to the Department of Oral Medicine and Radiology, seeking treatment for the replacement of missing teeth. The patient's dental history included extraction of multiple teeth in the past. Medical and family history was not significant. The patient was a chronic smoker and smoked two packs of cigarettes a day for 30 years and was a social drinker.

Intraoral examination revealed an asymptomatic, roughly ovoid cavitation, measuring about 0.1×1.0 cm, seen 2 cm below the left faucial pillar which appeared to be normal without any signs of colour changes, inflammation, or pus discharge. It was non tender on palpation and the surrounding mucosa also appeared to be normal [Table/Fig-1]. A provisional diagnosis of the Laimer Hackermann pharyngeal diverticulum was considered. Differential diagnosis included Zenker's diverticulum and Killian-Jamieson's pharyngeal pouches. No further radiological investigations were done as the patient was lost to follow-up. This case report highlights the incidental finding of a Laimer Hackermann diverticulum presented as a pharyngeal pouch in the oral cavity.



[Table/Fig-1]: Asymptomatic, ovoid cavitation along the left faucial pillar (arrow mark).

DISCUSSION

Laimer's diverticulum is a form of pharyngo-oesophageal diverticulum that is extremely uncommon with only four cases documented in literature [1]. Few studies have also suggested it to be the hernia of the mucosal and submucosal oesophageal wall as pharyngo-oesophageal diverticula are caused by fibrosis and motor dysfunction of the Upper Oesophageal Sphincter (UES), which can cause diverticula to protrude through potentially weak areas [1,2].

Pharyngo-oesophageal diverticula are classified as Killian-Jamieson's, Laimer's or Zenker's diverticulum depending on their site of origin [3]. Killian's diverticulum arises from Killian's triangle, the space between the thyro-pharyngeal and crico-pharyngeal muscle [4]. Laimer's diverticulum, arising from Laimer Hackerman's triangle is rare, between the crico-pharyngeal muscle and superior most oesophageal circular muscle. Zenker's diverticula are the most common type of pharyngo-oesophageal diverticulum, accounting for 0.01-0.11% of all gastrointestinal diverticula [5].

There are very few cases reported in Asian countries which indicates lower incidence of diverticula in Asia [3,6]. Boysen M et al., reported a single case of the co-existence of Zenker's and Laimer's diverticula out of more than 1000 reports of hypopharyngeal-oesophageal diverticula [7]. Laimer's diverticulum can be differentiated from Zenker's diverticulum by the fact that this diverticulum originates below the crico-pharyngeal muscle, has a broad base, and is a full-thickness true diverticulum [8]. Pharyngeal pouches are more frequent in those over the age of 70. Dysphagia, regurgitation, persistent cough, aspiration, and weight loss are all common symptoms [4]. This case also presented as a pharyngeal pouch in a 76-year-old male, but no such symptoms were associated with it.

The aetiology of pharyngeal pouch remains unknown, but theories centered upon a structural or physiological abnormality of the crico-pharyngeal and oesophageal muscles [9,10]. Because of the lack of reports stating that the diverticula arose from this site, it is universally not accepted that diverticula originate from this area. According to the literature, most of the pharyngo-oesophageal diverticulum (Zenker's) originates in Killian's triangle and are located between the thyro-pharyngeal and the crico-pharyngeal muscles [11]. Ekberg O and Nylander G in their radiographic study reported that 17 out of 650 Swedish cases, the diverticula originated just below the crico-pharyngeal muscle [10]. Nevertheless, diverticula originating from Laimer Hackerman's triangle are very rare [10]. Western countries

have recorded various causes and treatment methods for the pharyngo-oesophageal diverticulum [10]. A possible malignancy in a pouch should be suggested when there has been a sudden increase in the severity of symptoms, particularly progressive dysphagia or aphagia, or if there is pain, haemoptysis, or more marked regurgitation of food [11].

The treatment modalities include diverticulectomy with or without myotomy and modern endoscopic stapling surgery. Treatment can be performed through endoscopic surgery, diverticulectomy, and myotomy of the crico-pharyngeal muscle, although there is no consensus among surgeons regarding the treatment of choice [12]. As very few cases have been reported in literature, knowledge about this anatomical variant is a concern during surgical approaches.

CONCLUSION(S)

The Laimer Hackerman zone is an extremely rare true oesophageal diverticulum located below the cricopharyngeal muscle. Due to the low incidence, the aetiology and treatment are still unclear. To make an accurate diagnosis, clinical and surgical findings are important, such as the location of the diverticulum or the relationship between the diverticula and nearby pharyngeal muscles. Health professionals especially surgeons must understand the anatomical relationship of the diverticulum and the risks associated with surgical intervention.

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